

SURGICAL SITE INFECTION (SSI) FACT SHEET

Overview

A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place. Surgical site infections (SSIs) can sometimes be infections involving the skin only. Other SSIs are more serious and can involve tissues under the skin, organs or implanted material (such as a pacemaker).

Signs and Symptoms

Common symptoms include:

- Redness and pain around the surgical site;
- Drainage of cloudy or yellow fluid from the surgical wound; and
- Fever.

Causes and Transmission

Surgery involves the opening of one of the body's main barriers to infection, the skin. Bacteria, viruses, or fungus from either the patient themselves or from an outside source, such as the environment, can more easily enter the body through:

- The incision site;
- Implanted tissue (such as a replacement heart valve); and
- An implanted device (such as a pacemaker).

Risk Factors

An SSI is more likely to occur if:

- The patient has a chronic health problem or condition (for example, the patient is immunocompromised or diabetic);
- The surgical site is not clean (for example, emergency surgery after a car accident); and
- The surgery takes a long time (SSI risk increases with longer surgeries).

Complications

SSI can be severe and may spread to other parts of the body. These severe

infections can result in septic shock (collapse of blood pressure due to infection), organ damage or failure, abnormal blood clotting and death.

Tests and Diagnosis

Sometimes SSIs are obvious to a doctor based on symptoms. However, to figure out what kind of organism is causing the infection, specimens must be collected and tested in the laboratory. Sometimes radiologic procedures (X-ray) can also help with the diagnosis.

Treatments

Most SSIs can be treated with antibiotics that are targeted to the organism causing the infection. Some patients may need additional surgery to treat the infection. This could include removal or replacement of infected tissue or a contaminated device. 2

Prevention

There are a number of guidelines doctors, nurses and other health care providers follow to prevent SSIs including:

- Clean hands and arms up to elbows with antiseptic agent just before surgery.
- Clean hands with soap and water or alcohol-based hand rub before and after caring for each patient.
- If indicated, remove some of the hair around the surgical site immediately before surgery using electric clippers (not with a razor).
- Wear special hair covers, masks, gowns and gloves during surgery.
- When indicated, give patients needed antibiotics before surgery starts.
- Clean the skin at the site of surgery with a special soap that kills germs.

Additionally, there are steps the patient can take before and after surgery to help prevent SSIs:

- Tell your doctor about other medical problems you may have including allergies and diabetes.
- Quit smoking. Patients who smoke get more infections.
- Do not shave near where you will have surgery. Shaving with a razor can irritate skin and make it easier to develop an infection.
- Speak up if someone tries to shave you with a razor before surgery. Ask why you need to be shaved, and talk with your surgeon if you have concerns.
- After surgery, if you do not see your providers clean their hands, please ask them to do so.
- Family and friends who visit should not touch surgical wounds or dressings.

- Family and friends should clean hands with soap and water or alcohol-based hand rub before and after visiting you. If you do not see them clean their hands, ask them to do so.
- Make sure you understand how to care for your wound before leaving the hospital.
- Always clean your hands before and after caring for your wound.
- Know who to contact if you have questions or problems when you get home.
- Call your doctor immediately if you have any symptoms of a post-surgical infection (such as redness and pain at the surgery site, drainage or fever).

Disease Patterns

In Pennsylvania in 2014, 1,785 SSIs were reported among 116,781 procedures. This means that about 1.5 SSIs occur for every 100 surgical procedures in Pennsylvania. The percentage of surgical procedures with an associated infection decreased in Pennsylvania by 4.40 percent between 2013 and 2014.

Updated information about SSIs and other healthcare-associated infections in Pennsylvania is published each year by the Department of Health:

[http://www.health.pa.gov/facilities/Consumers/Healthcare%20Associated%20Infection%20\(HAI\)/Pages/HAI-Annual-Reports.aspx](http://www.health.pa.gov/facilities/Consumers/Healthcare%20Associated%20Infection%20(HAI)/Pages/HAI-Annual-Reports.aspx). 3

Additional Information

Centers for Disease Control and Prevention: <http://www.cdc.gov/HAI/ssi/ssi.html>

This fact sheet provides general information. Please contact your physician for specific clinical information.

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